

SONY®

B/W DIGITAL CAMERA MODULE

XCD-U100

XCD-SX90

XCD-V60

COLOR DIGITAL CAMERA MODULE

XCD-U100CR

XCD-SX90CR

XCD-V60CR

i S800

Digital Interface

SERVICE MANUAL

1st Edition

警告

このマニュアルは、サービス専用です。

お客様が、このマニュアルに記載された設置や保守、点検、修理などを行うと感電や火災、人身事故につながる可能性があります。

危険をさけるため、サービストレーニングを受けた技術者のみご使用ください。

設置や保守、点検、管理などを行う前に、別冊の取扱説明書の「安全のために」を必ずお読みください。

WARNING

This manual is intended for qualified service personnel only.

To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

WARNING

Die Anleitung ist nur für qualifiziertes Fachpersonal bestimmt.

Alle Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal ausgeführt werden. Um die Gefahr eines elektrischen Schlages, Feuergefahr und Verletzungen zu vermeiden, sind bei Wartungsarbeiten strikt die Angaben in der Anleitung zu befolgen. Andere als die angegeben Wartungsarbeiten dürfen nur von Personen ausgeführt werden, die eine spezielle Befähigung dazu besitzen.

AVERTISSEMENT

Ce manuel est destiné uniquement aux personnes compétentes en charge de l'entretien. Afin de réduire les risques de décharge électrique, d'incendie ou de blessure n'effectuer que les réparations indiquées dans le mode d'emploi à moins d'être qualifié pour en effectuer d'autres. Pour toute réparation faire appel à une personne compétente uniquement.

Table of Contents

Manual Structure

Purpose of this manual	3
Related manuals	3

1. Service Overview

1-1. Board Location	1-1
1-2. Removing/Installing the Cabinet	1-1
1-2-1. Upper case/Lower case	1-1
1-2-2. Rear Panel Assembly	1-2
1-2-3. Front Panel Assembly	1-2
1-3. Removing/Installing the Board	1-3
1-3-1. BI-217/218/219 Board	1-3
1-3-2. FM-96 Board	1-3
1-3-3. DC-DC Converter	1-4
1-3-4. IF-1068 Board	1-4
1-3-5. CN-3020 Board	1-5
1-4. Lens Mount Cap, Filter Bracket, Optical Dust Cover (XCD-V60/SX90/U100), Infrared Cut Filter (XCD- V60CR/SX90CR/U100CR), Sealing Rubber	1-6
1-5. Round Type Connector (12-Pin)	1-7
1-6. Matching Connectors and Cables	1-7
1-7. Signal Inputs and Outputs	1-7
1-8. Unleaded Solder	1-8

2. Adjustment

2-1. Writing of Serial Number and Node Unique ID	2-1
2-2. Camera Adjustment	2-2
2-2-1. Black and White (B/W) Camera (XCD-U100/SX90/V60)	2-3
2-2-2. Color Camera (XCD-U100CR/SX90CR/V60CR)	2-4

3. Circuit Description

3-1. BI-217, BI-218, and BI-219 Boards	3-1
3-2. FM-96 Board	3-1
3-3. IF-1068 Board	3-1
3-4. CN-3020 Board	3-1

4. Spare Parts

4-1. Notes on Repair Parts	4-1
4-2. Exploded Views	4-2
4-3. Packing Materials & Supplied Accessories	4-4

5. Block Diagram

Overall	5-1
---------------	-----

6. Frame Wiring

Frame Wiring	6-1
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Manual Structure

Purpose of this manual

This manual is the Service Manual of the B/W Digital Camera Module XCD-U100/SX90/V60 and Color Digital Camera Module XCD-U100CR/SX90CR/V60CR.

This manual contains the service overview, adjustment, circuit description, spare parts, block diagrams, and frame wiring.

The service of this unit is basically performed by the replacement of board. Therefore, the schematic diagram, board layout and electrical parts list are not contained.

Related manuals

In addition to this Service Manual the following manual is provided.

- **“Operating Instructions” (supplied with this unit)**

Part No.: 3-287-508-0X (Japanese, English)

3-287-508-1X (Korean)

This manual is necessary for application and operation of this unit.

- **“Semiconductor Pin Assignments” CD-ROM (Available on request)**

This “Semiconductor Pin Assignments” CD-ROM allows you to search for semiconductors used in Broadcast and Professional equipment.

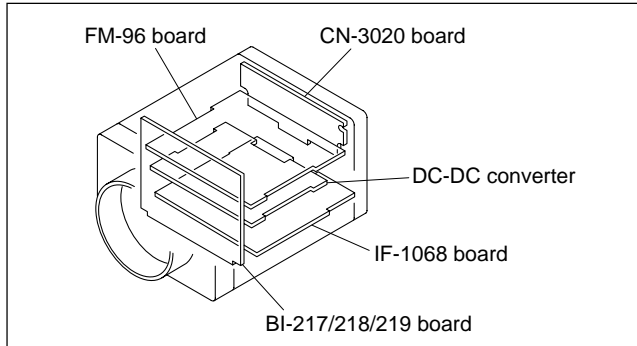
This manual contains a complete list of semiconductors and their ID Nos., and thus should be used together with the CD-ROM.

Part number: 9-968-546-06

Section 1

Service Overview

1-1. Board Location

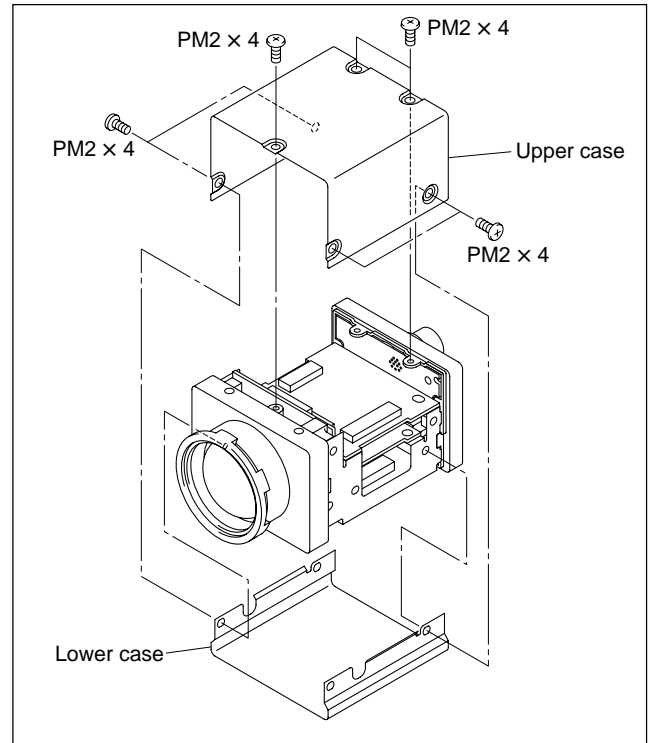


Board name	Model name
BI-217 board	XCD-V60
	XCD-V60CR
BI-218 board	XCD-SX90
	XCD-SX90CR
BI-219 board	XCD-U100
	XCD-U100CR
CN-3020 board	Common
DC-DC converter	XCD-V60/V60CR/U100/U100CR
	XCD-SX90/SX90CR
FM-96 board	Refer to "Section 4 Spare Parts"
IF-1068 board	Common

1-2. Removing/Installing the Cabinet

1-2-1. Upper case/Lower case

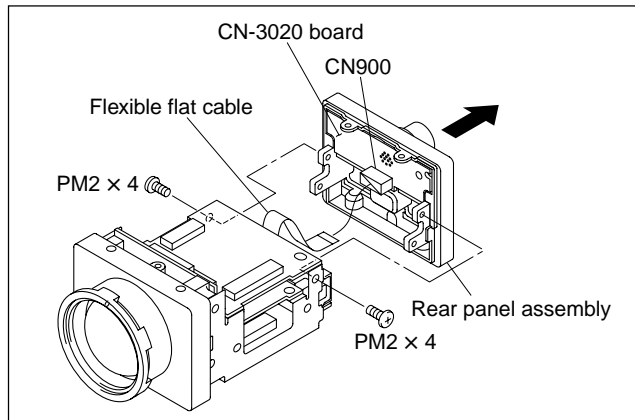
1. Remove the seven screws, then remove the upper case and lower case.



2. Attach the upper case and lower case in the reverse order of step 1.

1-2-2. Rear Panel Assembly

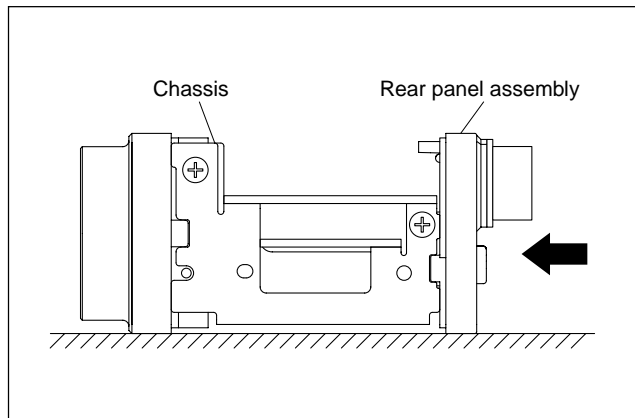
1. Remove the upper case and lower case.
(Refer to Section 1-2-1.)
2. Remove the two screws, then pull out the rear panel assembly.
3. Disconnect the flexible flat cable from the connector (CN900) on the CN-3020 board.



4. Attach the rear panel assembly in the reverse order of steps 1 to 3.

Note

When attaching the rear panel assembly, securely attach it while pushing it against the chassis.

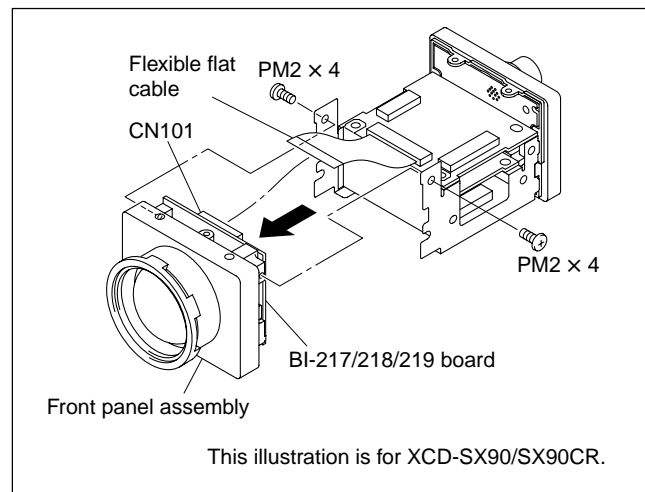


1-2-3. Front Panel Assembly

Note

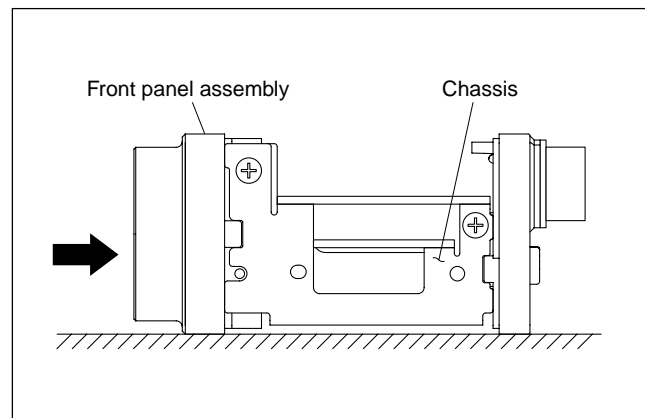
When replacing the front panel assembly, perform the writing the serial number and Node Unique ID and camera adjustment. For details, refer to Sections 2-1 and 2-2.

1. Remove the upper case and lower case.
(Refer to Section 1-2-1.)
2. Remove the two screws, then pull out the front panel assembly.
3. Disconnect the flexible flat cable from the connector (CN101) on the BI-217/218/219 board.



4. Attach the front panel assembly in the reverse order of steps 1 to 3.

Note

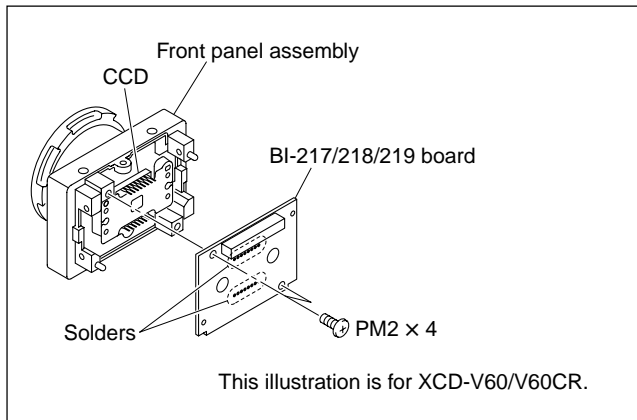


When attaching the front panel assembly, securely attach it while pushing it against the chassis.

1-3. Removing/Installing the Board

1-3-1. BI-217/218/219 Board

1. Remove the upper case and lower case.
(Refer to Section 1-2-1.)
2. Remove the front panel assembly.
(Refer to Section 1-2-3.)
3. Remove the two screws.
4. Remove the solders of CCD, then remove the BI-217/218/219 board.
 - BI-217 board: 16 solders
 - BI-218 board: 24 solders
 - BI-219 board: 20 solders



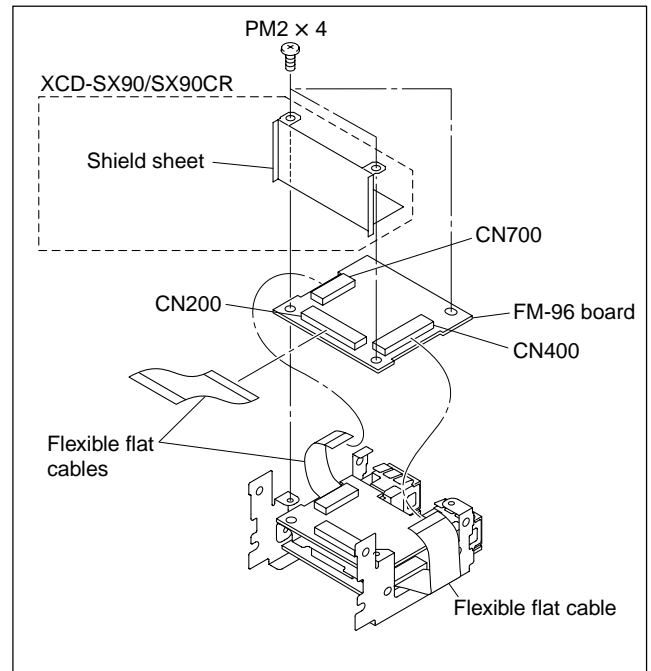
5. Install the BI-217/218/219 board in the order of steps 3, 4, 2 and 1.

1-3-2. FM-96 Board

Note

When replacing the FM-96 board, perform the writing of the serial number and Node Unique ID. For details, refer to Section 2-1.

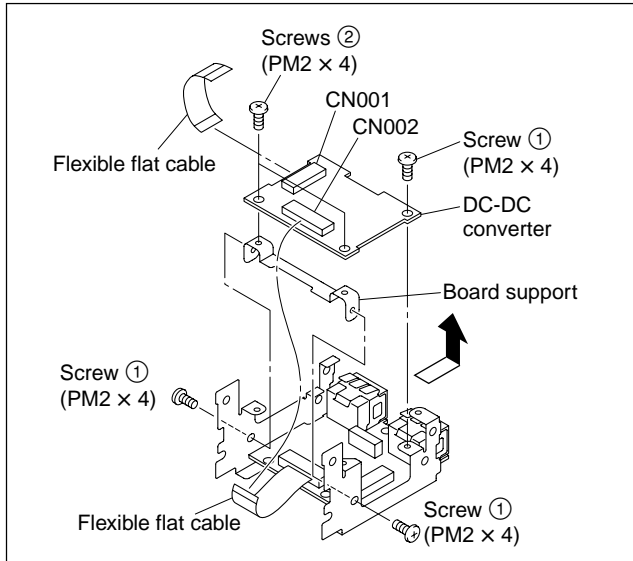
1. Remove the upper case and lower case.
(Refer to Section 1-2-1.)
2. Remove the rear panel assembly.
(Refer to Section 1-2-2.)
3. Remove the front panel assembly.
(Refer to Section 1-2-3.)
4. Disconnect the three flexible flat cables from the connectors (CN200, CN400 and CN700) on the FM-96 board.
5. **XCD-SX90/SX90CR:**
Remove the three screws, then remove the shield sheet and FM-96 board.
XCD-V60/V60CR/U100/U100CR:
Remove the three screws, then remove the FM-96 board.



6. Install the FM-96 board in the reverse order of steps 1 to 5.

1-3-3. DC-DC Converter

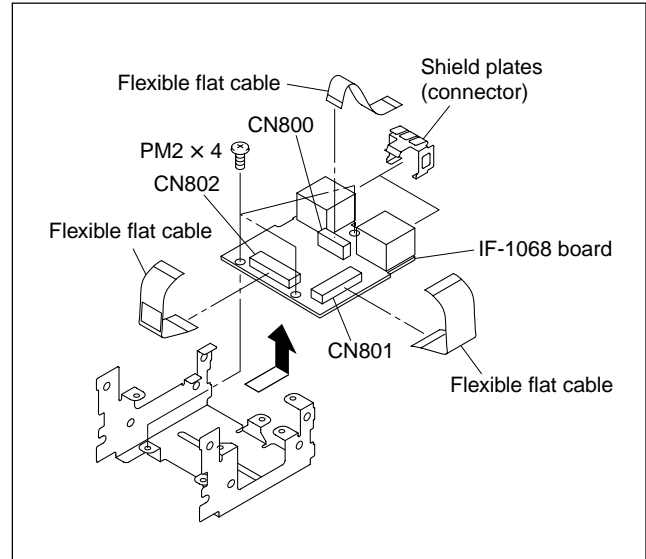
1. Remove the upper case and lower case.
(Refer to Section 1-2-1.)
2. Remove the rear panel assembly.
(Refer to Section 1-2-2.)
3. Remove the front panel assembly.
(Refer to Section 1-2-3.)
4. Remove the FM-96 board. (Refer to Section 1-3-2.)
5. Disconnect the two flexible flat cables from the connectors (CN001 and CN002) on the DC-DC converter.
6. Remove the three screws ①, then remove the DC-DC converter in the direction of the arrow.
7. Remove the two screws ②, then remove the board support.



8. Attach the DC-DC converter in the reverse order of steps 1 to 7.

1-3-4. IF-1068 Board

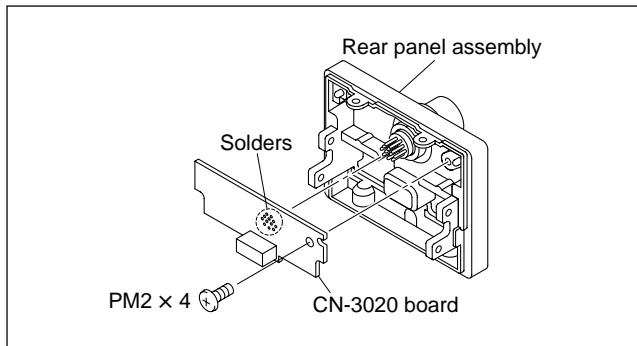
1. Remove the upper case and lower case.
(Refer to Section 1-2-1.)
2. Remove the rear panel assembly.
(Refer to Section 1-2-2.)
3. Remove the front panel assembly.
(Refer to Section 1-2-3.)
4. Remove the FM-96 board. (Refer to Section 1-3-2.)
5. Remove the DC-DC converter.
(Refer to Section 1-3-3.)
6. Disconnect the three flexible flat cables from the connectors (CN800, CN801 and CN802) on the IF-1068 board.
7. Remove the three screws, then remove the IF-1068 board in the direction of the arrow.
8. Remove the two shield plates (connector).



9. Install the IF-1068 board in the reverse order of steps 1 to 8.

1-3-5. CN-3020 Board

1. Remove the upper case and lower case.
(Refer to Section 1-2-1.)
2. Remove the rear panel assembly.
(Refer to Section 1-2-2.)
3. Remove the twelve solders of the connector from the CN-3020 board.
4. Remove the screw, then remove the CN-3020 board.



5. Install the CN-3020 board in the reverse order of steps 1 to 4.

1-4. Lens Mount Cap, Filter Bracket, Optical Dust Cover (XCD-V60/SX90/U100), Infrared Cut Filter (XCD-V60CR/SX90CR/U100CR), Sealing Rubber

1. Remove the upper case and lower case.
(Refer to Section 1-2-1.)
2. Remove the front panel assembly. (Refer to Section 1-2-3.)
3. Remove the lens mount cap.
4. **XCD-V60/SX90/U100:**
Remove the two screws (M1.7 × 4), then remove the filter bracket and optical dust cover.
- XCD-V60CR/SX90CR/U100CR:**
Remove the two screws (M1.7 × 4), then remove the filter bracket and infrared cut filter.
5. Remove the two screws (M1.7 × 4).

Note

When attaching the screws, attach the screw ① first and then ②.

6. Remove the two screws (PM2 × 4), then remove the BI-217/218/219 board and spacers.

Note

When attaching the spacers, be sure to attach them back to the original positions.

7. Remove the sealing rubber.

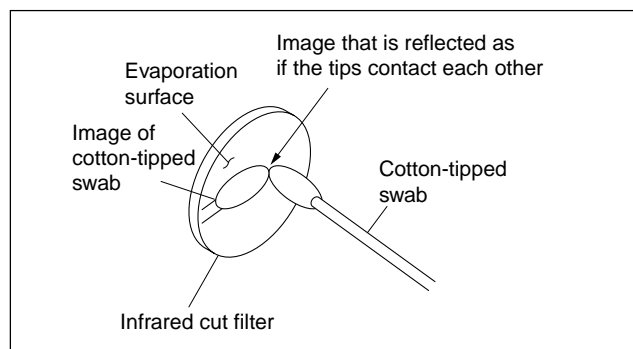
8. Attach the lens mount cap, filter bracket, optical dust cover, infrared cut filter and sealing rubber in the reverse order of steps 1 to 7.

Note for attaching the infrared cut filter (XCD-V60CR/SX90CR/U100CR)

Attach the infrared cut filter so that its evaporation surface is placed on the side of BI-217/218/219 board.

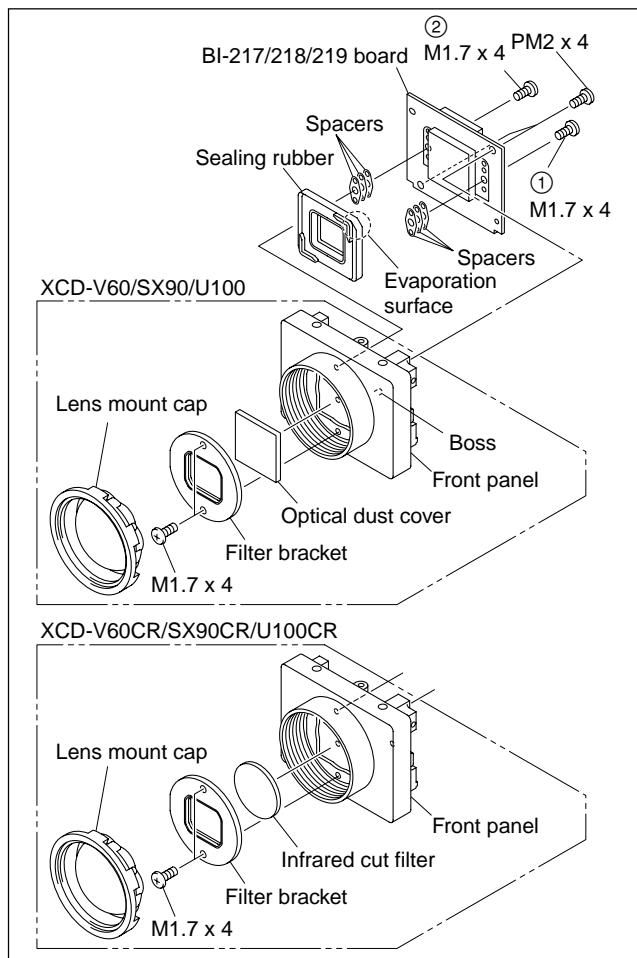
Evaporation surface checking method

When you put the cotton-tipped swab on the surface of the infrared cut filter, the image of the cotton-tipped swab is reflected as if the tips contact each other (state being reflected in a mirror) if it is the evaporation surface.



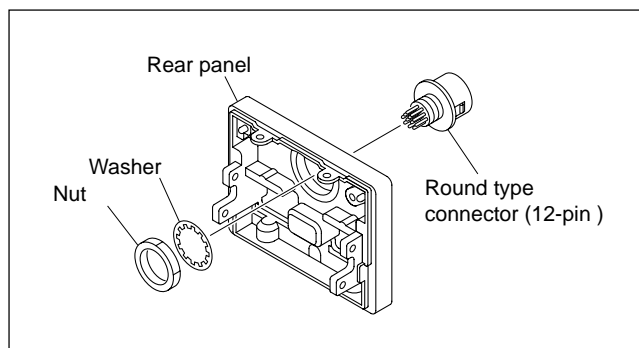
Note for attaching the sealing rubber

Attach the sealing rubber to the boss side with its chamfered portion placed upward.
(Refer to the illustration on the left.)



1-5. Round Type Connector (12-Pin)

1. Remove the upper case and lower case.
(Refer to Section 1-2-1.)
2. Remove the rear panel assembly.
(Refer to Section 1-2-2.)
3. Remove the CN-3020 board. (Refer to Section 1-3-5.)
4. Remove the nut and washer, then remove the round type connector (12-pin).



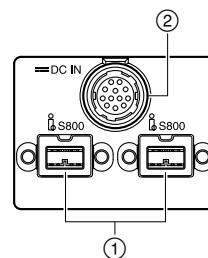
5. Attach the round type connector (12-pin) in the reverse order of steps 1 to 4.

1-6. Matching Connectors and Cables

When external cables are connected to the connector of each unit, the hardware listed below (or equivalents) must be used.

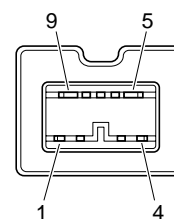
Connector	Matching connector/cable
IEEE1394b	IEEE1394b cable (9P-9P) (Commercially available products)
	IEEE1394b cable (9P-6P) (Commercially available products)
DC IN	Camera cable CCXC12P02N (2 m) CCXC12P02N (5 m) CCXC12P02N (10 m) CCXC12P02N (25 m)

1-7. Signal Inputs and Outputs



① IEEE1394b connector

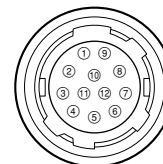
- IEEE1394b-2002



— External view —

Pin No.	Signal name	Remarks
1	TPB (–)	Twisted pair B (–)
2	TPB (+)	Twisted pair B (+)
3	TPA (–)	Twisted pair A (–)
4	TPA (+)	Twisted pair A (+)
5	TPA (R)	Twisted pair A (Ground reference)
6	VG	Power ground
7	N.C.	
8	VP	Power voltage input
9	TPB (R)	Twisted pair B (Ground reference)

② DC IN: 12-pin (male)



— External view —

Pin No.	Signal	Pin No.	Signal
1	POWER_GND	7	GPIO_IN2
2	POWER_IN	8	GPIO_OUT2–
3	ISO_GND	9	GPIO_OUT2+
4	STROBE_OUT	10	GPIO_IN1
5	GPIO_OUT1–	11	TRIGGER_IN
6	GPIO_OUT1+	12	ISO_GND

1-8. Unleaded Solder

Boards requiring use of unleaded solder are printed with a lead free mark (LF) indicating the solder contains no lead.(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size.)



: LEAD FREE MARK

Notes

- Be sure to use the unleaded solder for the printed circuit board printed with the lead free mark.
- The unleaded solder melts at a temperature about 40 °C higher than the ordinary solder, therefore, it is recommended to use the soldering iron having a temperature regulator.
- The ordinary soldering iron can be used but the iron tip has to be applied to the solder joint for a slightly longer time. The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful.

Section 2 Adjustment

2-1. Writing of Serial Number and Node Unique ID

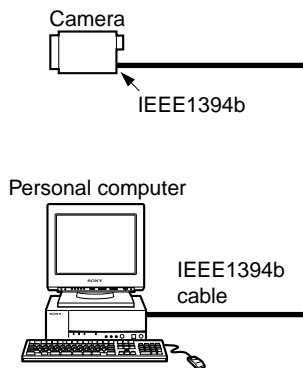
Note

Perform the writing when replacing the FM-96 board or front panel assembly.

Required equipment

- Personal computer (PC)
- IEEE1394.b board
- IEEE1394b cable (Commercially available products)
- IIDC_CAM**** software: J-7120-410-A
(**** represents the version number.)

Connection

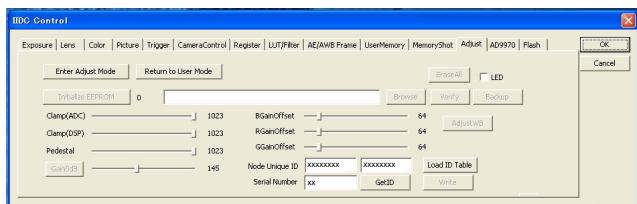


Preparation

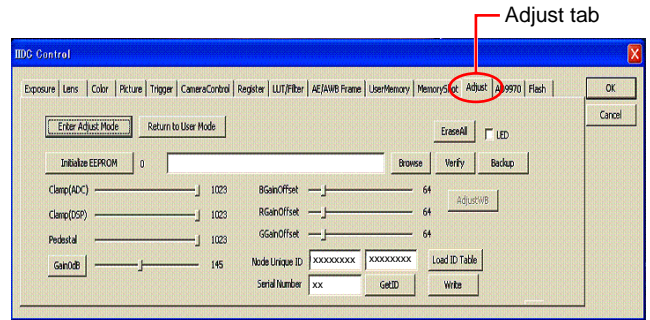
1. Connect each device as shown in the above illustration.
2. Install the IIDC control software in an arbitrary place of PC.

Procedure

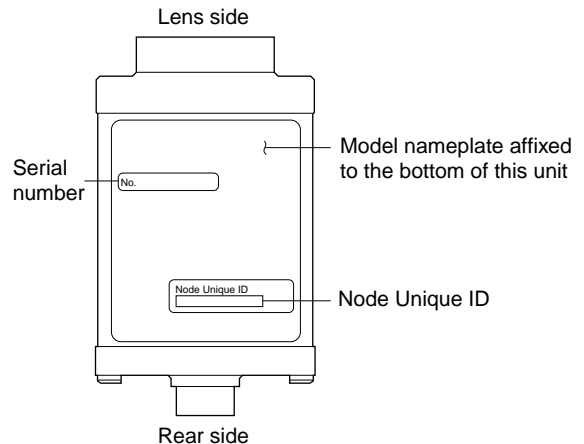
1. Start the IIDC_CAM****software.
The IIDC control window is displayed.



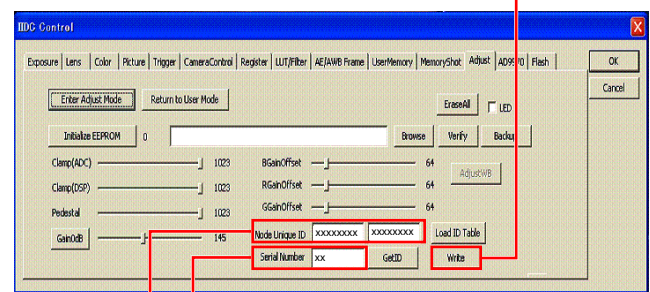
2. Click the “Adjust” tab and “Enter Adjust mode” tab.
The unit enters the adjustment mode.



3. Check the model nameplate on the bottom of this unit.
Type the Node Unique ID in the Node Unique ID box and type the serial number in the Serial Number box.



Write button

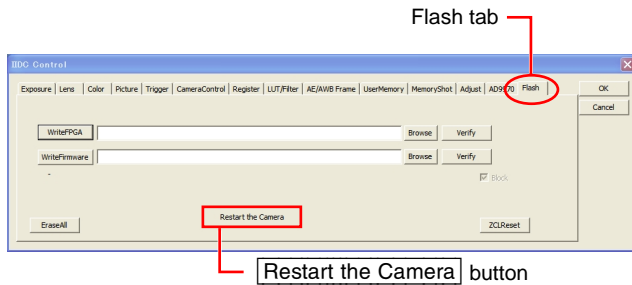


Type the serial number.

Type the Node Unique ID.

4. Click the **Write** button.

5. Click the “Flash” tab.
6. Click the **Restart the Camera** button to restart.



7. Check if the serial number and Node Unique ID on the model nameplate correspond to each number in the IIDC control window. If not, perform the procedure from step 1 again.

2-2. Camera Adjustment

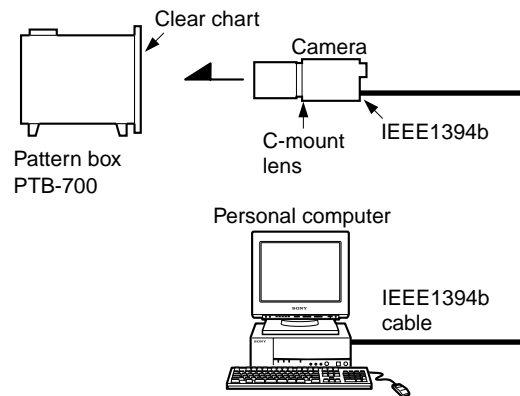
Note

Perform the adjustment when replacing the front panel assembly.

Required equipment

- Personal computer (PC)
- IEEE1394b cable(Commercially available products)
- IIDC_CAM***** software: J-7120-410-A
(***** represents the version number.)
- Pattern box PTB-700: J-6431-850-A
- Clear chart (manufactured by Kenko): J-6080-621-A
- C-mount lens VF2509 (Canon) or equivalent

Connection

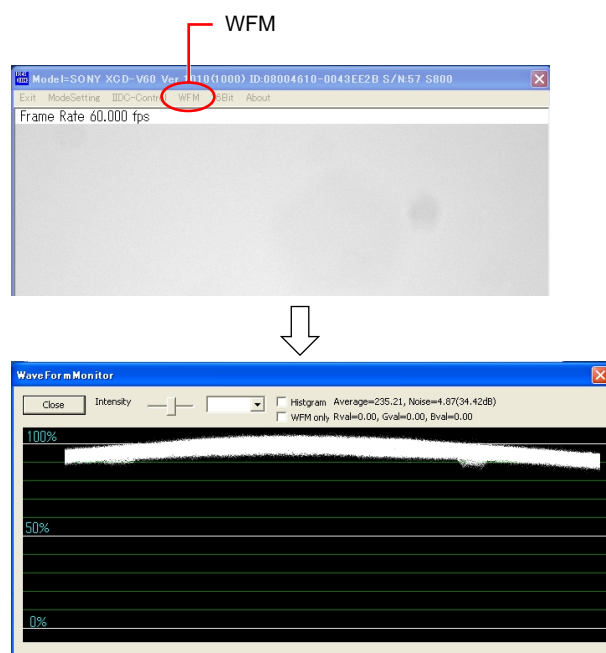


Preparation

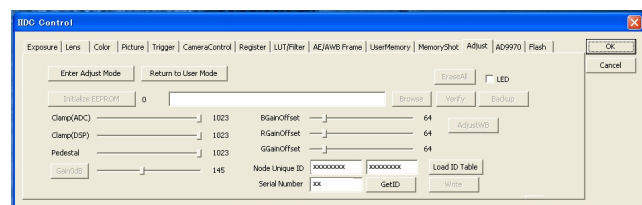
1. Connect each device as shown in the above illustration.
2. Install the IIDC_CAM***** software in an arbitrary place of PC.

2-2-1. Black and White (B/W) Camera (XCD-U100/SX90/V60)

1. Shoot the pattern box in the center of the window through the clear chart at the wide end.
2. Start the IIDC_CAM**** software.
3. Click WFM (Waveform Monitor) in the menu. The waveform is displayed.

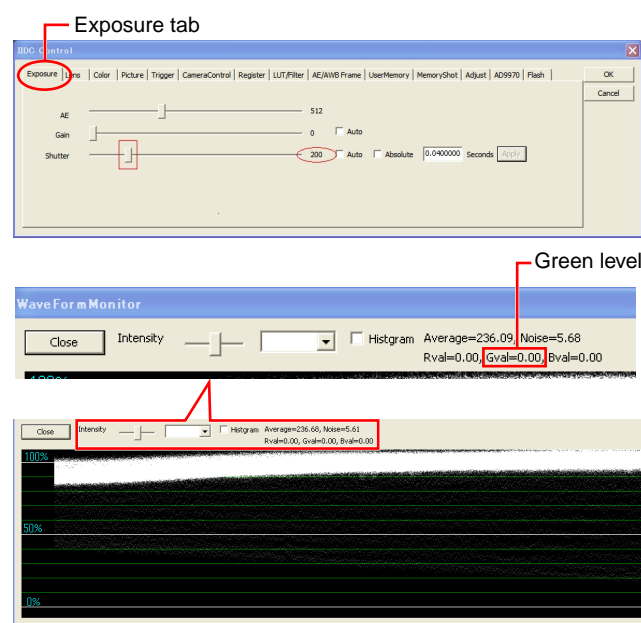


4. Start the IIDC_CAM**** software. The IIDC control window is displayed.

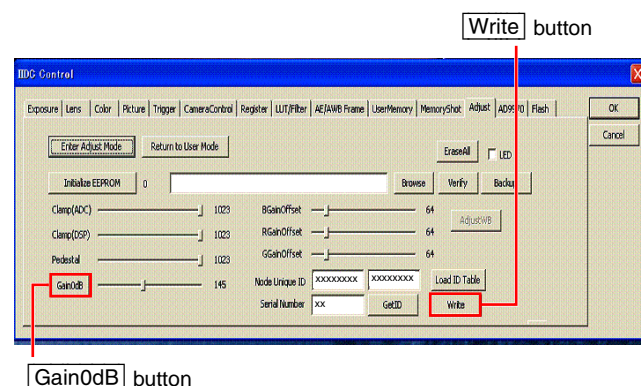


5. Set the lens iris to F1.4. (Zoom at the full angle of field)

6. Click the Exposure tab and adjust the shutter in the window so that the Green level reaches close to 100% (does not exceed 100% (236)) in the WFM window. The shutter value (reference value) at which the Green level reaches close to 100% on WFM is as follows.
XCD-V60: 13
XCD-SX90: 19
XCD-U100: 19



7. Click the "Adjust" tab in the IIDC control window.



8. Click the Gain0dB button. The Gain 0dB adjustment is performed.
9. Check that the adjustment level (Y) satisfies the specification A.
 $A = 235 \pm 1$ step

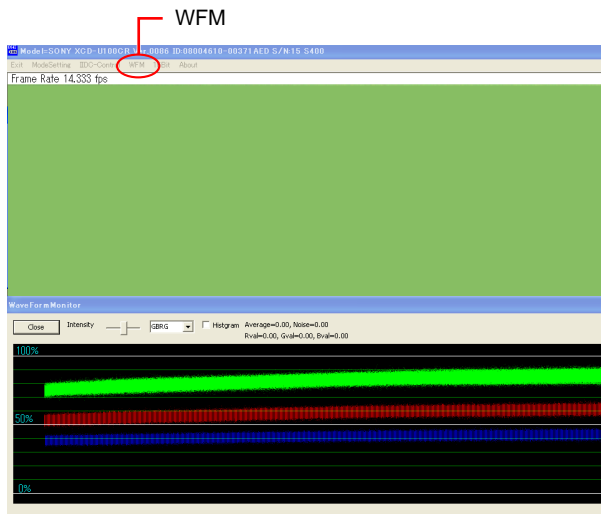
Note

If the specification A is not satisfied, perform the procedure from step 1 again.

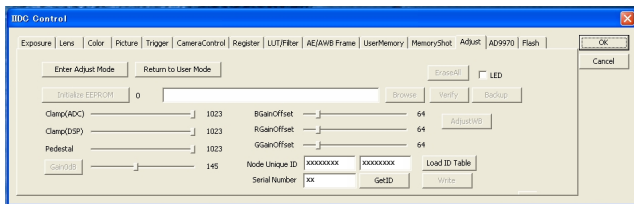
10. After the adjustment is completed, click the Write button and write the adjustment value.

2-2-2. Color Camera (XCD-U100CR/SX90CR/V60CR)

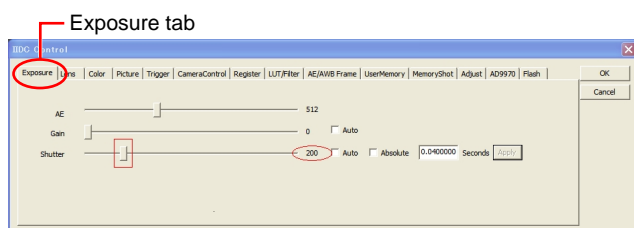
1. Shoot the pattern box in the center of the window through the clear chart at the wide end.
2. Start the IIDC_CAM**** software.
3. Click WFM (Waveform Monitor) in the menu.
The waveform is displayed.



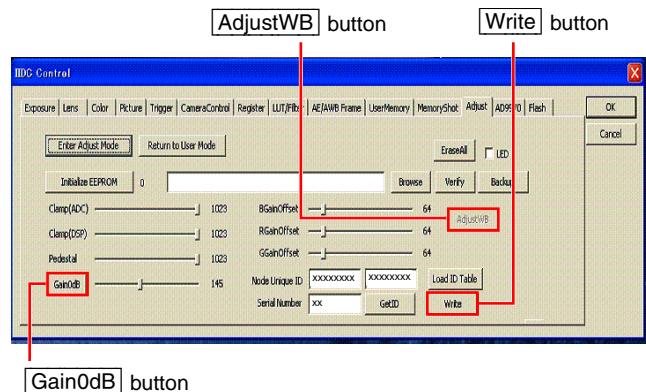
4. Start the IIDC_CAM**** software.
The IIDC control window is displayed.



5. Set the lens iris to F1.4. (Zoom at the Tele end)
6. Click the Exposure tab and adjust the shutter in the window so that the Green level reaches close to 100% (does not exceed 100% (236)) in the WFM window.
The shutter value (reference value) at which the Green level reaches close to 100% on WFM is as follows.
XCD-V60CR: 28
XCD-SX90CR: 41
XCD-U100CR: 36



7. Click the "Adjust" tab in the IIDC control window.



8. Click the **AdjustWB** button to adjust the color.
9. Click the **Gain0dB** button.
The Gain 0dB adjustment is performed.
10. Check that the adjustment level satisfies the specification A.

A = 235 ± 1 step

Note

If the specification A is not satisfied, perform the procedure from step 1 again.

11. After the adjustment is completed, click the **Write** button and write the adjustment value.
12. Click the **AdjustWB** button.
The WB adjustment is performed.
13. Check that the adjustment level satisfies the specification B.

B = 235 ± 1 step

Note

If the specification B is not satisfied, perform the procedure from step 1 again.

14. After the adjustment is completed, click the **Write** button and write the adjustment value.

Section 3

Circuit Description

3-1. BI-217, BI-218, and BI-219 Boards

These boards consist of CCD (IC101) and ADC (BI-217: IC105), BI-218: IC102), and BI-219: IC105) that are used for VGA color/black & white (BI-217), SXGA color/black & white (BI-218), and UXGA color/black & white (BI-219).

CCD is driven using the power, communication (AD_SCK/SL/SDATA), sync signal (AD_CLK/HD/VD), and CCD vertical drive pulses sent from the FM-96 board and using the CCD horizontal drive pulse generated by an analog-to-digital converter (ADC). CCD analog data is input to ADC and output to FPGA on the FM-96 board as digital data so as to produce an LVDS signal through CDS/GAIN/CLAMP/AD conversion in ADC

3-2. FM-96 Board

This board consists of an oscillator (X200), FPGA (IC201: TG/DSP/CPU/SDRAM controller incorporating an IEEE1394LINK, a, b-compatible layer), SDRAM (IC301) for image saving, SDRAM (IC502) for CPU execution, EEPROM (IC402) for camera parameter saving, a V driver (IC200), flash (IC503) for FPGA data saving, and an FPGA write connector (CN500). A power pulse is input from a DC-DC converter through the flexible wiring board of connector CN101.

The image data of an LVDS signal is input from CN200 to FPGA as a flow of image data, passed through DSP and image SDRAM, and converted into a 1394 packet using a 1394LINK layer. The converted data is output through CN801 to the 1394PHY layer on the IF-1068 board.

Two-way communication is done in the block related to a 1394 system. Image data is not only output, but also the control data from the host is input. The control data is saved in the register of a LINK layer. Internal CPU interprets instructions and sets them to the internal module of FPGA.

CN801 is also used as the interface of the external input/output signal from CN901 on the CN-3020 board.

3-3. IF-1068 Board

This board consist of an oscillator (X800), an IEEE1394PHY layer (IC803), 1394 connectors (CN803 and CN804), and an external input signal isolation circuit (consisting of PH800, PH801, and PH802).

A power signal is input from a DC-DC converter through the flexible wiring board of CN802. It also plays the part for transferring the original power to the DC-DC converter.

Image data is input from the LINK layer of the FM-96 board to the PHY layer and output to the connected connectors (CN803 and CN804) as a differential signal of 800/400 MHz. The control data from host PC is input from a 1394 connector as a differential signal, and simultaneously, power is also supplied from the 1394 connector. The external input signal input from the CN-3020 board is passed through an external input signal isolation circuit and sent to FPGA on the FM-96 board.

X800 is sent to the PHY and FM-96 board because it is used as the clock of a 1394 system and used in the CPU/1394 module inside FPGA.

3-4. CN-3020 Board

This board consists of a 12-pin connector (CN901) for an external input/output signal and external power, and an external output signal isolation circuit (PH901 and PH902).

External power is used to compensate for the insufficient power supply on the host side during multiple daisy-chain connections.

Section 4

Spare Parts

4-1. Notes on Repair Parts

1. Safety Related Components Warning

WARNING

Components marked \triangle are critical to safe operation.
Therefore, specified parts should be used in the case of replacement.

2. Standardization of Parts

Some repair parts supplied by Sony differ from those used for the unit. These are because of parts commonality and improvement.

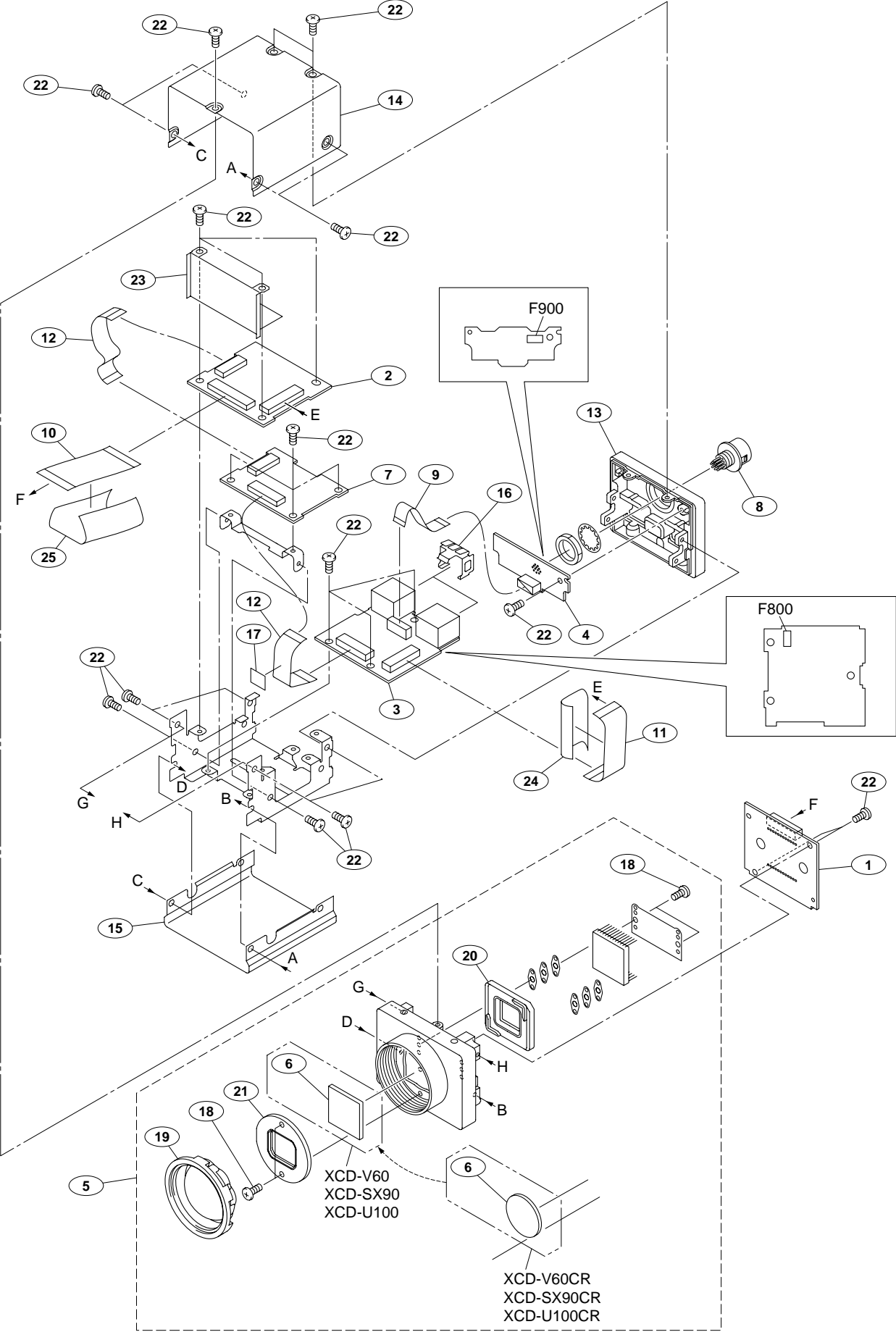
3. Stock of Parts

Parts marked with “o” at SP (Supply Code) column of the spare parts list may not be stocked. Therefore, the delivery date will be delayed.

4. Harness

Harnesses with no part number are not registered as spare parts.

4-2. Exploded Views



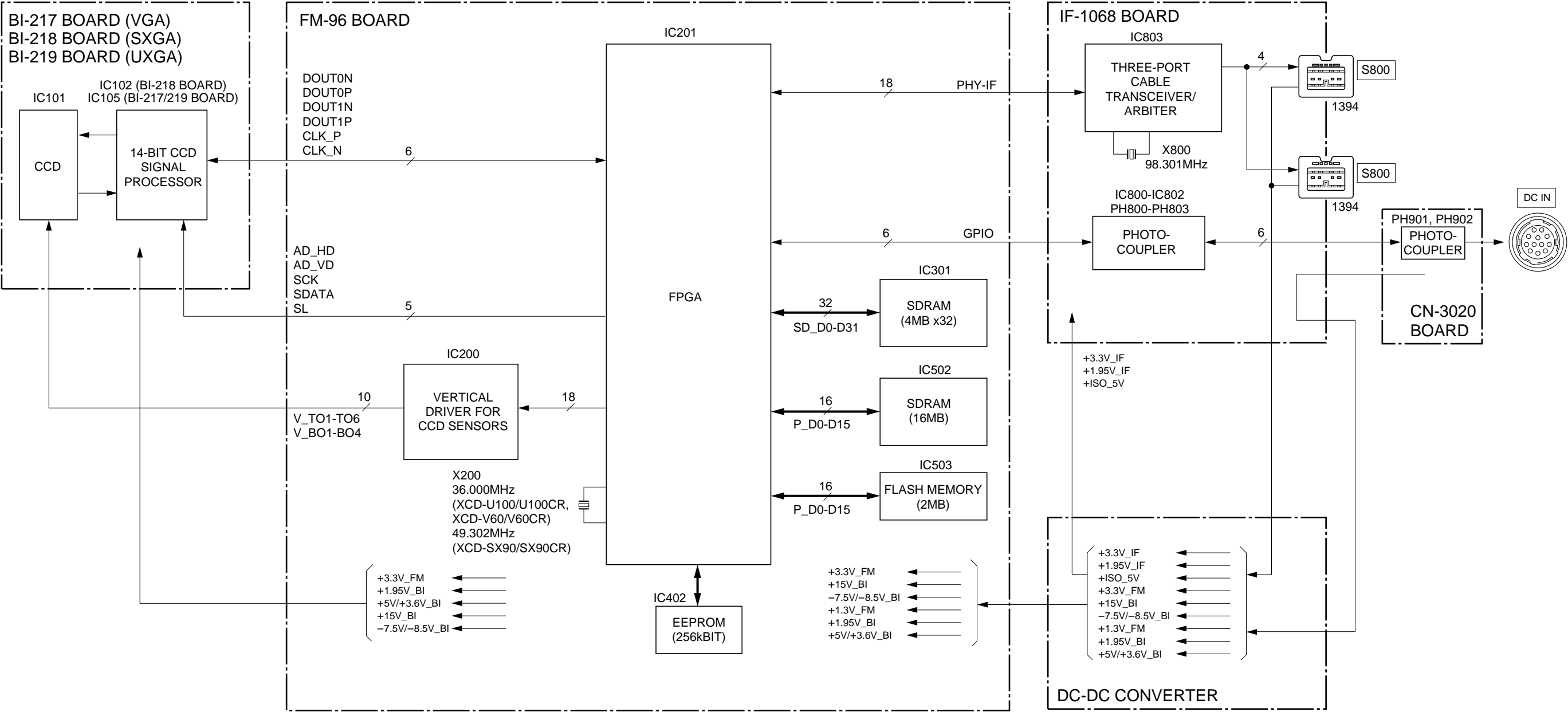
No.	Part No.	SP	Description
1	A-1441-025-A	s	MOUNTED CIRCUIT BOARD, BI-217 (FOR XCD-V60/V60CR)
	A-1441-026-A	s	MOUNTED CIRCUIT BOARD, BI-218 (FOR XCD-SX90/SX90CR)
	A-1441-027-A	s	MOUNTED CIRCUIT BOARD, BI-219 (FOR XCD-U100/U100CR)
2	A-1441-028-A	s	MOUNTED CIRCUIT BOARD, FM-96 V60 (FOR XCD-V60)
	A-1441-030-A	s	MOUNTED CIRCUIT BOARD, FM-96 SX90 (FOR XCD-SX90)
	A-1441-031-A	s	MOUNTED CIRCUIT BOARD, FM-96 SX90CR (FOR XCD-SX90CR)
	A-1441-032-A	s	MOUNTED CIRCUIT BOARD, FM-96 U100 (FOR XCD-U100)
	A-1441-033-A	s	MOUNTED CIRCUIT BOARD, FM-96 U100CR (FOR XCD-U100CR)
	A-1466-674-A	s	MOUNTED CIRCUIT BOARD, FM-96 V60CR (FOR XCD-V60CR)
3	A-1441-034-A	s	MOUNTED CIRCUIT BOARD, IF-1068
4	A-1441-035-A	s	MOUNTED CIRCUIT BOARD, CN-3020
5	A-1466-663-A	s	PANEL ASSY (RP), FRONT (FOR XCD-V60)
	A-1466-746-A	s	PANEL ASSY (RP), FRONT (FOR XCD-V60CR)
	A-1466-748-A	s	PANEL ASSY (RP), FRONT (FOR XCD-SX90)
	A-1466-768-A	s	PANEL ASSY (RP), FRONT (FOR XCD-SX90CR)
	A-1466-769-A	s	PANEL ASSY (RP), FRONT (FOR XCD-U100)
	A-1466-771-A	s	PANEL ASSY (RP), FRONT (FOR XCD-U100CR)
6	1-251-887-11	s	COVER, OPTICAL DUST (FOR XCD-V60/SX90/U100)
	1-547-185-51	o	FILTER, INFRARED CUT (FOR XCD-V60CR/SX90CR/U100CR)
7	1-480-424-11	s	CONVERTER, DC-DC (FOR XCD-V60/V60CR/U100/U100CR)
	1-480-424-21	s	CONVERTER, DC-DC (FOR XCD-SX90/SX90CR)
8	1-691-410-31	s	CONNECTOR, ROUND TYPE 12P
9	1-831-171-11	s	CABLE, FLEXIBLE FLAT (14 CORE)
10	1-834-991-11	s	CABLE, FLEXIBLE FLAT (40 CORE)
11	1-834-992-11	s	CABLE, FLEXIBLE FLAT (30 CORE)
12	1-834-993-11	s	CABLE, FLEXIBLE FLAT (20 CORE)
13	3-287-055-01	s	PANEL, REAR
14	3-287-057-01	s	CASE, UPPER
15	3-287-058-01	s	CASE, LOWER
16	3-287-629-01	s	PLATE,SHIELD (CONNECTOR)
17	3-287-630-01	s	SHEET, PROTECTION
18	3-303-809-81	s	SCREW (M1.7X4), SPECIAL HEAD
19	3-622-446-01	s	CAP,LENS MOUNT(FOR C MOUNT)
20	3-863-430-01	s	RUBBER,SEAL (FOR XCD-SX90/SX90CR/U100/U100CR)
	3-992-901-01	s	RUBBER,SEAL (FOR XCD-V60/V60CR)
21	3-863-431-01	s	BRACKET,FILTER
22	3-968-729-71	s	SCREW (M2), LOCK ACE, P2
23	3-398-173-01	s	SHIELD SHEET (FOR XCD-SX90/SX90CR)
24	3-398-174-01	s	MG SHEET A (FOR XCD-SX90/SX90CR)
25	3-398-175-01	s	MG SHEET A (FOR XCD-SX90/SX90CR)
F800	△ 1-533-998-21	s	FUSE, (SMD) (1A/125V)
F900	△ 1-533-998-21	s	FUSE, (SMD) (1A/125V)

4-3. Packing Materials & Supplied Accessories

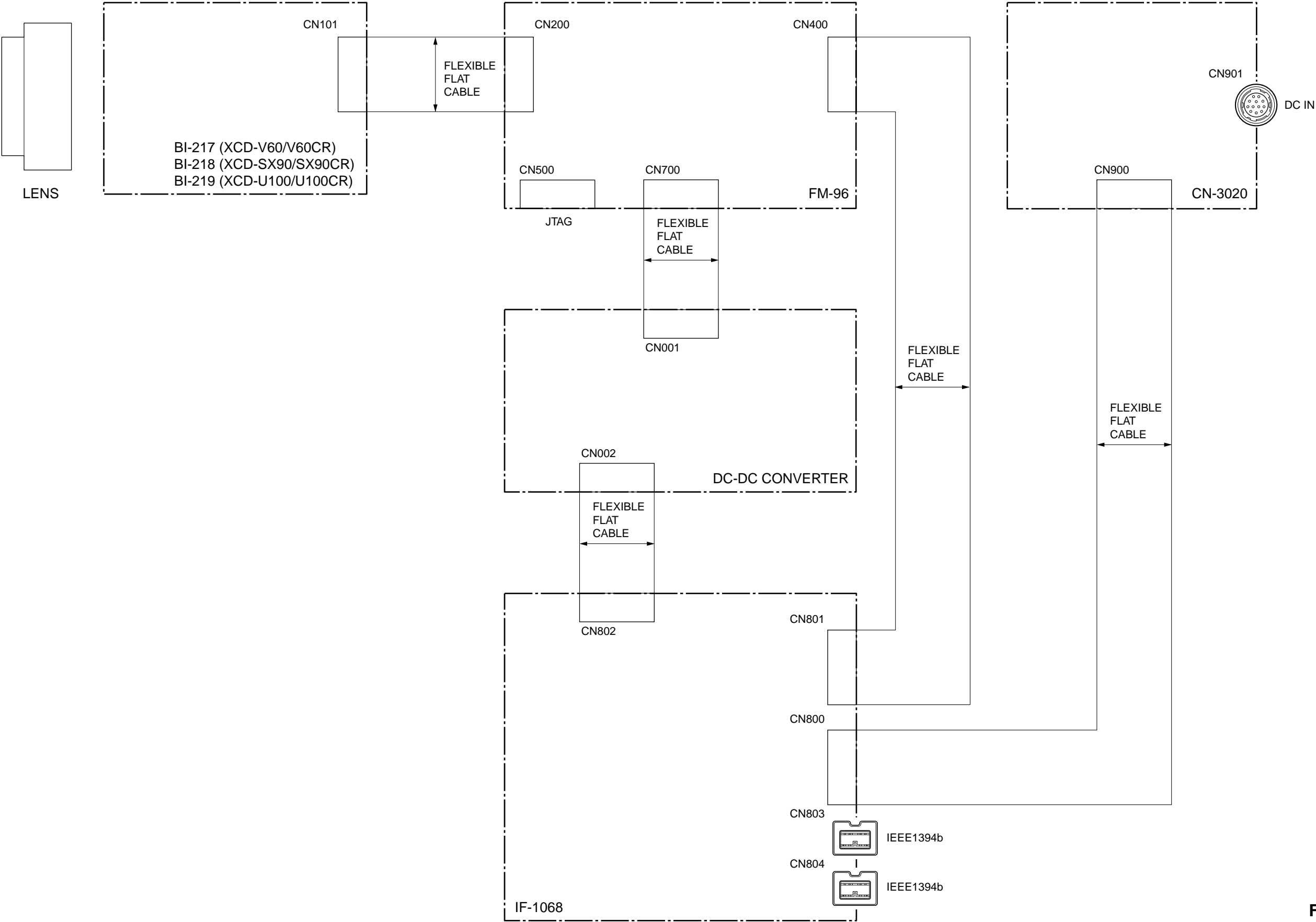
PACKING MATERIALS & SUPPLIED ACCESSORIES

Ref. No. or Q'ty	Part No.	SP Description
1pc	△ 3-287-508-01	s MANUAL, INSTRUCTION (JAPANESE,ENGLISH)
1pc	△ 3-287-508-11	s MANUAL, INSTRUCTION (KOREAN)

Section 5
Block Diagram



Section 6
Frame Wiring



XCD-U100 (SY)
XCD-U100CR (SY)
XCD-SX90 (SY)
XCD-SX90CR (SY)
XCD-V60 (SY)
XCD-V60CR (SY) E
9-968-402-01

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